REMARKS/ARGUMENTS

Amendments

The Applicants have amended claims 1, 16 and 30. Claims 1-43 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Claim Rejections – 35 U.S.C. § 103 (a)

Claims 1-43 are rejected under 35 U.S.C § 103(a) as being unpatentable over Harrison et al (GB002342254A1, hereinafter Harrison) in view of Grace (WO 009419912, hereinafter "Grace"). The Applicant respectfully traverses the rejection of these claims.

The Harrison reference appears to disclose a method and apparatus for collecting and using statistics of a communications system to measure the system's performance. Harrison analyzes collected statistics (data associated with a particular parameter such as call set-up(page 6, lines16-20)) with reference to a threshold that varies with sample size to solve the problem of changing sample sizes and fixed thresholds. Basically Harrison sets more than one threshold according to the collected sample size. If the sample size is large, the threshold is low (e.g., 10%) and if the sample size is small, the threshold is high (e.g., 50%). The system varies a threshold value according to the data samples in the measurement so as to increase accuracy of the analysis. (Page 7, line 14 - page 8 line 3)

Grace appears to disclose a system and method that correlates current alarm and problem events to historical data. The correlation is sought since "events" in a

system that occur either periodically and at the same time or very close in time, may be related. The operator of the network may use the correlation to devise appropriate time windows to look for these occurrences and identify relationships. This allows for more timely system and equipment management. (page 4, lines 6-20).

The present invention discloses a method and system for determining influence between parameters (page 9- page 10, paragraph 0017) in a communications network. The basic premise is to obtain a set of measurements of two or more parameters. The samples associated with the parameters are measured to determine whether the correlation is significant. In the case of three or more parameters, each parameter is compared with each of the other parameters so as to obtain a "partial correlation" between each of the parameters. (Page 6, paragraph 0010).

Independent claim 1 has been amended to more clearly and distinctly claim the invention to which the Applicant is entitled. The Applicant respectfully directs the Examiner's attention to amended claim 1.

> 1. (Currently Amended) A method for determining whether two or more parameters influence one another within a communications network, comprising the steps of:
> obtaining a set of measurements for two or more parameters within the communications network;
> <u>determining a correlation between each of the two or more parameters;</u>
> <u>determining a partial correlation between each of the two or more parameters if at least three parameter measurements are made;</u>
> determining whether the correlations and the partial correlations are statistically significant; and
> <u>determining whether the two or more parameters, if any, influence one another based on the statistically significant correlations and partial correlations.</u> (emphasis added)

The Applicant respectfully asserts that neither Harrison nor Grace teach or suggest the emphasized limitations in claim 1 above.

In the Detailed Action, a correspondence is drawn between Harrison and Applicant's preamble which recites in part, "determining whether two or more parameters influence one another in a communications network. However, Applicant has reviewed the cited portion of the Harrison reference and there appears to be no specific mention of determining the influence of one parameter on another parameter without the use of a threshold value.

In contrast to Harrison, which compares statistics to a varying threshold value, the present invention compares and correlates parameters to each other. As stated above, a set of data measurements is obtained for each of two or more parameters and a correlation is taken. If at least three parameter measurements are taken, then a partial correlation between each pair of parameters is taken. A determination is made whether there is a statistical significance and whether the two or more parameters influence each other (Page 6, para. 0010).

The Applicant has reviewed the Grace reference which is cited against the third limitation of claim 1, that of "determining a partial correlation between each of the two or more parameters." The cited portion of Grace sets out the likely relationships between events that occur in an equipment management system. Grace also discloses that historical data can improve accuracy as the database increases in size. Effectively, this portion of Grace is describing how the invention increases accuracy as the amount of data increases. There appears to be no mention of a partial correlation between each of two or more parameters as disclosed by the Applicants' invention

Grace is cited against the claim 1 limitation of "determining whether the correlations and partial correlations are significant." The Applicant has reviewed the reference and determined that the cited portion ranks the "relatedness" of a selected event with two or more other events. However, the measure of relatedness is the statistical probability of further events having occurred within the same temporal window by chance (Page 4, lines 31-33). In other words, the events of interest are restricted to occurring in a specific temporal window. In the present invention, a specific temporal window is not required and does not restrict the correlations and partial correlations. The Applicant respectfully submits that the cited portion is not the same as the subject limitation.

The Grace reference is cited against the element of claim 1, "determining whether the two or more parameters influence each other based on the statistically significant correlations and partial correlations." The cited portion of Grace deals with the low probability of two events occurring simultaneously (i.e., in a specific time window) and not being related. In sum, the simultaneous occurrence of two seemingly unconnected events is statistically significant and Grace's invention relies on this fact (Page 7, lines 8-11). As noted above, the Applicants' inventive element determines the significance of the correlations and partial correlations, not specific time windows. The Grace reference relies on a simultaneous occurrence to connect two events and does not determine the correlation between two parameters or partial correlation between three parameters.

Therefore, the Applicants respectfully submit that Harrison and Grace references do not teach or suggest the emphasized elements of claim 1 either

individually or in combination. This being the case, claim 1 is patentable over the cited prior art. As between claim 1 and the Harrison and Grace references, the Applicant submits that independent claims 16 and 30 contain limitations analogous to those found in claim 1. For the above given reasons the Applicant respectfully submits that Claims 16 and 30 are also patentable over the Harrison and Grace references. Also, the respective dependent claims of claims 1, 16 and 30 contain the same novel limitations. This being the case the respective dependent claims are also patentable over the Harrison and Grace references

Therefore, the Applicant respectfully submits that the substantial differences between the disclosures of Harrison and Grace compared to the independent and dependent claims of the present invention are indicative of the novelty of the present invention.

CONCLUSION

In view of the foregoing remarks, the Applicants believe all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for Claims 1-43.

The Applicants request a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

Sidney L. Weatherford

By Sidney L. Weatherford
Registration No. 45,602
Ericsson Patent Counsel

Ericsson Inc.
6300 Legacy Drive
M/S EVW 2-C-2
Plano, TX 75024
Phone: 972-583-8656
Fax: 972-583-7864
sidney.weatherford@ericsson.com